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ABSTRACT

Recent college assessment initiatives of the federal government, regional accrediting associations, state systems of higher education, and higher education institutions are examined. The goals and strategies of existing college assessment programs are also considered. The following issues related to developing and implementing college assessment policies and practices are discussed: student placement and remediation, student progression and graduation, general education program evaluation, student major field achievement, and instruments used in evaluations. Guidelines for governance organizations and institutions that are establishing assessment policies are offered, including: assessment policies should be multidimensional; college assessment policies should exceed the goal of minimum competency; and assessment policies should include provisions for analyses of the effects of assessment. Appendices include: the Middle State Association Criteria on Program and Student Outcomes, and the Southern Association for Colleges and Schools Standard for Institutional Effectiveness; descriptions of the assessment statutes and policies of seven states; and information on the college assessment programs of three colleges. (SW)

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The Emergence of College Outcome Assessments:

**Prospects for Enhancing
State Colleges and Universities**

Working Draft Paper 87-1*
March 2, 1987

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- an annual conference
(the first scheduled for June 14-17, 1987, in Denver)
- commissioned papers
(focused on implementation and other timely assessment concerns; available through the Forum for a small fee)
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This paper is part of an on-going assessment collection maintained by the Forum. We are pleased to make it more widely available through the ERIC system.

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Executive Summary

During the past five years, faculty and administrators, appointed lay leaders, elected political leaders, and representatives of accrediting associations have sought to justify public support for higher education and achieve quality assurance by evaluating the effectiveness of higher education institutions. They are particularly interested in evaluating the instructional component and using the results for improving student learning, improving the quality of instruction, and assisting them in making resource allocation decisions. During these past five years, the interest of policymakers and educators has shifted away from the traditional input and process methods of evaluation to greater emphasis upon the products and outcomes. Measuring students' learning and development after they complete either a portion or all of the requirements toward an associate or baccalaureate degree has emerged as a popular way of gauging instructional effectiveness and providing public accountability simultaneously.

Policymakers and educators seek to accomplish various different goals through assessment, and each goal requires a different assessment approach, involving different individuals or groups of students, and produces a variety of consequences. The variation in assessment goals include the following: (1) measuring the effectiveness of remedial/developmental curricula toward improving the basic skills of lower division students; (2) assuring that each student has developed the expected basic skills by the time he/she reaches the junior year in college; (3) measuring the effectiveness of the undergraduate core curricula and co-curricular programs toward developing the general education knowledge and skills, as well as the affective development expected of college graduates; (4) measuring the effectiveness of academic programs in developing the knowledge and skills of graduating seniors in their major fields of study; and (5) assuring the public that each college graduate has the general education and major field competencies expected of college graduates.

Each of these different assessment goals not only requires a different approach, but also requires different resource allocations and produces different consequences. For example, if the goal is academic and co-curricular program evaluation, then assessing samples of students, rather than every individual student, is sufficient, and the results will equip policymakers and educators with the information they need for improving the quality of curricula and instruction and perhaps for determining areas of needed resources. On the other hand, if the goal is to assure student cognitive and affective development, then every student must be involved in the assessment; policymakers and educators will then have information that assures that each student obtains the knowledge, skills and affective development expected of college graduates.

Whichever course of action is chosen, policymakers should adhere to the following principles:

- * College assessment policies should be multidimensional, and student cognitive development should be only one component;

- * Assessment policies and practices should exceed assessing basic skills and minimum competence, especially if the instructional program of the institution is broader;
- * Assessment policies should be developed with realistic expectations of fulfilling the stated goals:
- * Assessment policies should include provisions for analyses of the effect of assessment upon improving curricula, teaching and learning; and
- * Assessment results should yield dividends that justify the state's or institution's investment.

Assessment policies must also be accompanied by provisions for addressing the important issues concerning the effects of assessments upon individual students, faculty and institutions. The following are among the questions that need to be addressed by policymakers:

- * Who will pay the cost of implementing assessments and improving the outcomes?
- * How will individual students be affected by their performance on outcome assessments?
- * How will students of various ethnic, socioeconomic and educational backgrounds be affected differently by assessment in terms of their access to, retention in, and graduation from college?
- * How will higher education institutions be affected in terms of resource allocations based upon their assessment results?
- * How will policymakers and educators interpret and use the information produced by assessment?

This paper (1) examines ~~the~~ recent college assessment initiatives of the federal government, regional accrediting associations, state systems of higher education, and higher education institutions regarding college assessment; (2) examines the goals and strategies of the existing college assessment programs; (3) presents some guiding principles for governance organizations and institutions that are establishing assessment policies; and (4) examines the issues related to developing and implementing college assessment policies and practices.

I. INTRODUCTION

America's colleges and universities have the threefold mission of instruction, public service, and research. Although higher education institutions have different program structures, and serve students at various levels and with a variety of academic and vocational interests, most institutional mission statements, as well as institutional resource allocations, characterize undergraduate instruction as the primary function. Public service and research occupy secondary roles to varying degrees, depending upon the tradition of the institution and depending upon the sources and scale of financial support it receives.

During the past five years, faculty and administrators, appointed lay governing board leaders, elected political leaders, and representatives of accrediting associations have sought to justify public support for higher education by evaluating the effectiveness of higher education institutions. They are particularly interested in evaluating the instructional component and in using evaluation results for improving student learning and the quality of instruction. During these past five years, policymakers and educators have shifted their interest away from the traditional input and process methods of evaluation to greater emphasis upon the products and outcomes.

Measuring students' learning and development after they complete either a portion or all of the requirements toward an associate or baccalaureate degree has recently emerged as a way of gauging instructional effectiveness, and providing public accountability simultaneously. The changes in knowledge, skills and personal development which students exhibit at various stages of their college experience serve as reasonable proxies of the quality of the curriculum and instruction to which they have been exposed, and the quality of their college co-curricular experiences. In some cases, these measures are used as an indicator of students' readiness to either move up to the next level of education or to receive a degree. Although other methods of instructional evaluation are frequently used to assess instructional effectiveness, i.e., student ratings of courses, faculty peer evaluations, and alumni achievement, etc., policymakers and educators appreciate standardized cognitive assessments for their unique qualities of objectivity, efficiency, capacity for use in making comparisons among academic programs and institutions, and their tradition as a reasonable measure of achievement in the educational process.

Because the sources and purposes for concern over instructional quality and evaluation are so varied, it is important to examine the various goals, initiatives, requirements, and consequences of various assessment approaches in order to develop feasible and effective assessment policies and practices. Policymakers and educators seek to accomplish different goals through assessment, which require different assessment approaches involving different individuals or groups of students and with a variety of possible consequences. First, they must decide what will be assessed and for what purpose. For example, there are a variety of possible purposes for assessment, including the following: (1) measuring the effectiveness of remedial/developmental curricula toward improving

the basic skills of lower division students; (2) assuring that each student has developed the expected basic skills by the time he/she reaches the junior year in college; (3) measuring the effectiveness of the undergraduate core curricula and co-curricular programs toward developing the general education knowledge and skills, as well as the affective development expected of college graduates; (4) measuring the effectiveness of academic programs in developing the knowledge and skills of graduating seniors in their major fields of study; and (5) assuring the public that each college graduate has the general education and major field competencies expected of college graduates.

Each of these different assessment goals not only requires a different approach, but requires different resource allocations and produces different consequences. For example, if the goal is academic and co-curricular program evaluation, then assessing samples of students, rather than every individual student, is sufficient and the results will equip policymakers and educators with the information they need to improve the quality of curricula and instruction, and perhaps to determine areas of needed resources. On the other hand, if the goal is to assure student cognitive and affective development, then every student must be involved in the assessment. Policymakers and educators will then have information that assures that each student obtains the knowledge, skills and affective development expected of college graduates. Assessment policies must also be accompanied by provisions for addressing the important issues involving the effects of assessment upon individual students and institutions. The following are among the questions that need to be addressed by policymakers:

- * Who will pay the cost of implementing assessments and improving the outcomes?
- * How will individual students be affected by their performance on outcome assessments?
- * How will students of various ethnic, socioeconomic and educational backgrounds be affected differently by assessment, in terms of their access to, retention in, and graduation from college?
- * How will higher education institutions be affected, in terms of resource allocations based upon their assessment results?
- * How will policymakers and educators interpret and use the information produced by assessment?

Existing assessment policies and initiatives vary among the different regions, states and institutions. The variation in policies and initiatives are caused by differences in goals and traditions, as well as differences in the organizational structures of the various regional accrediting associations, state systems of higher education, and colleges and universities. Indeed, different assessment policies and practices have emerged among the few regional accrediting associations, state governments, and higher education institutions that have initiated assessment programs in response to similar demands for quality assurance and accountability.

This paper (1) examines the recent college assessment initiatives of the federal government, regional accrediting associations, state systems of higher education, and higher education institutions regarding colleges assessment; (2) examines the goals and strategies of the existing college assessment programs; (3) presents some guiding principles for governance organizations and institutions that are establishing assessment policies; and (4) examines the issues related to developing and implementing college assessment policies and practices.

II. SOURCES OF COLLEGE ASSESSMENT ACTIVITY

Federal Government Initiatives

Although the federal government has no constitutional authority for higher education, federal appropriations of twenty-two billion dollars for higher education in fiscal year 1986 represented nearly one-half the total amount of state appropriations for the fifty states combined (Digest of Education Statistics, 1987). The federal government is accountable to taxpayers for how it expends tax dollars, as U.S. Secretary of Education William Bennett indicates in the following remarks:

"Colleges must begin to assess their performance and publish the results, because parents and students are growing uneasy about the rapid rise in tuition costs and need consumer protection. Because colleges have not provided such information, the rumor mill has flourished, and prospective students face a landscape barren of real information with which to make informed choices, but are littered instead with trendy indicators of campus popularity and status. No one wants high-school seniors depending on slick publications that claim to tell it like it really is... The traditional gauges of academic quality (input measures such as faculty-student ratios, the number of students with doctorates, and library holdings) bare little on what critics charge are academe's shortcomings -- that many of our graduates do not seem to possess the knowledge, skills and in some cases the character and civic virtues that should constitute a highly educated person. Virtually nobody, at least nobody outside the academy, believes the resources are lacking. The case cannot be made that the American people have been ungenerous to higher education. They have not, and we all know that. To address their problems, colleges and universities must focus not on inputs, but on the quality of teaching and curricular reform. They should state their goals, measure their success in meeting those goals, and make the results available to everyone. Institutions should employ a variety of evaluation methods, including standardized tests, interviews and questionnaires, reviews of students' written work and extracurricular activities, and studies of alumni and dropouts." (Bennett, 1985)

Secretary Bennett also pledged the federal government's support to assist higher education in developing methods for assessing outcomes.

Table 1 is a list of nine student and institutional assessment projects that were funded in 1986 by the Department of Education through grants from the Fund for the Improvement of Postsecondary Education (FIPSE). Five of these projects are aimed toward helping higher education institutions identify ways to assess students' knowledge and skills in general education; two are focused on assisting institutions in assessing students' knowledge and skills in specific major fields; and the remaining two are aimed at providing networks and forums for college faculty and administrators to learn more about how to assess the outcomes of their educational programs. While Secretary Bennett spoke of a variety of methods and techniques for assessment, the federal support thus far is focused upon cognitive development.

Outcome assessment in the future could affect federal decisions, such as determining "eligible" institutions for recipients of federal financial aid, or institutions that are "eligible" to receive federal grants and contracts. The federal government has traditionally relied upon regional accrediting associations to make these determinations on its behalf. The Department of Education now appears to be seeking greater assurance of outcome accountability than the accrediting agencies have provided in the past.

Initiatives of Regional Accrediting Associations

The six regional associations that accredit colleges and universities are the linchpin for outcome assessment and quality assurance in higher education. These membership organizations have a history spanning nearly 100 years of being impartial judges of the quality of higher education institutions. The chief administrative and academic leaders of the nation's colleges and universities constitute the governing bodies of these accrediting associations. They establish the policies by which accrediting associations operate, determine the standards upon which institutions are judged, and ultimately approve the member institutions that seek to be accredited. Institutions are evaluated periodically (every five to ten years) to determine if they meet accreditation standards.

A stamp of approval by any of the six regional accrediting associations for many years has been tantamount to approval for funding from both the federal government and state governments. Since the 1952 Veterans Readjustment Act, the federal government has relied upon regional accrediting associations to determine which colleges and universities were of sufficient quality to merit receiving federal funding (Section 253 of Pub.L. 82-550; 66 STAT.675). All federal statutes since 1952, wherein funds are appropriated to higher education institutions, contain a statement by Congress requiring the commissioner (now the U.S. Secretary of Education) to publish a list of nationally recognized accrediting associations that are reliable authorities of the quality of training or education offered by postsecondary institutions (Finkin, 1973; Kaplin, 1975). In addition, all states have a Postsecondary Education Authorization Act, requiring higher education institutions to be approved by a designated state agency (generally the centralized governing/coordinating board) or be accredited by an accrediting association in order to be licensed to operate in the state.

Table 1

**Outcome Assessment Project Funded by the Fund for the
Improvement of Postsecondary Education (FIPSE) in 1986**

<u>Organizations</u>	<u>Program Description</u>	<u>Amount of</u>	
		<u>Year</u>	<u>Funding</u>
1. American Association for Higher Education	To conduct three national forums on assessment issues and to commission papers and provide referral services on college outcome assessments	1986	\$141,571
2. Association of American Colleges	For a pilot program to assess the learning of students completing majors in selected disciplines in the arts and sciences	1986	95,700
3. Harvard University	To design and carry out assessments for selective institutions	1986	33,178
4. University of Kentucky	To develop a consortium of Appalachian liberal arts colleges to respond to the Southern Association of Colleges and outcome assessment standards	1986	93,296
5. Lehman College of City University of New York	To evaluate the new undergraduate general education curriculum	1986	88,680
6. Rhode Island College	For assessing undergraduate student development from entrance through graduation	1986	80,000
7. State University of New York at Fredonia	To assess student achievement in the new general education program	1986	38,903
8. University of Tennessee	To establish a national center to provide networking and technical assistance on assessment in higher education	1986	88,812
9. West Virginia State College	To reform the undergraduate curriculum in general education and to assess student development in general education	1986	55,105

In addition to government reliance upon regional accrediting associations, consumers rely upon the judgement of accrediting associations in determining where to attend college. Colleges and universities also rely upon accrediting associations to determine whether to accept course credits from students transferring from other academic institutions; and graduate and professional schools rely upon accrediting associations when admitting students by taking into account the accreditation status of their undergraduate institutions.

Despite the long tradition and widespread public dependence, for the past fifteen years, regional accrediting associations have faced very strong criticism for failing to adopt and enforce standards that provide quality assurance. Critics have charged that the standards used by regional accrediting associations place heavy emphasis upon inputs -- such as admissions scores of entering students, the number of books in the library, the size of the endowment and the physical plant, and the credentials of the faculty -- without any concern for outcomes and results (Troutt, 1979).

In response to critics, two of the six regional accrediting associations, the Middle States Association of Colleges and Schools (MSA) and the Southern Association of Colleges and Schools (SACS), have established new standards to require outcome assessment. The other four associations have yet to establish outcome standards, but have encouraged institutions to assess outcomes through the existing standards. The MSA was the first to adopt outcome standards, called "Program Outcome" and "Student Outcome", in 1982; and the SACS adopted its outcome standards, called "Institutional Effectiveness", in 1984. As with other accreditation standards, colleges exercise a great deal of flexibility in designing methods and selecting instruments for executing the standards, with limited guidance from the accrediting associations.

The outcome standards for the MSA and SACS are very similar.¹ The following excerpts from the MSA and SACS standards provide an example of the range of possible approaches the two accrediting associations expect colleges and universities to conduct in order to satisfy the outcomes standards:

Middle States Association:

A plan for the measurement of outcomes may well include: an evaluation of undergraduate scholastic achievement, taking the form of comparison of scores in standardized tests with the results of placement examinations taken at entrance; a study of the performance of graduates in senior colleges or in graduate and professional schools; long-term study of the achievement (both vocational and avocational) of the alumni, based on data gathered periodically and systematically; and intensive study of one class from entrance through graduation and beyond (Standards for Accreditation, Commission on Higher Education of the Middle States Association of Colleges and Schools, 1984).

¹The complete MSA and SACS standards on outcome assessment are presented in Appendix A.

Southern Association of Colleges and Schools:

In addition to establishing procedures for evaluating the extent to which their educational goals are being achieved, institutions should ascertain periodically the change in the academic achievement of their students. Procedures used to evaluate instructional programs may include: peer evaluation of educational programs; structured interviews with students and graduates; changes in students' values, as measured by standard instruments or self-reported behavior patterns; pre- and post-testing of students; surveys of recent graduates; surveys of employers of graduates; student scores on standardized examinations of locally constructed examinations; performance of graduates in graduate school; performance of graduates of professional programs on licensure examinations; or the placement of graduates of occupational programs in positions related to their fields of preparation (Standards of The College Delegate Assembly, Commission on Colleges, Southern Association of Colleges and Schools, 1984).

Enforcing Accreditation Standards

These new standards for assessing outcomes reflect a new era for regional accreditation that will compel every college and university to engage in outcomes assessment activities. The lack of prescription, as far as requiring specific instruments or methods and procedures to be used, may cause some uneasiness among state and federal officials who find imbalances in the usefulness of various outcome assessment approaches. Since these standards have only been enacted in the last four years, it is too soon to know how institutions will respond and how accrediting associations will enforce the new standards.

Observers of higher education, particularly those in state and federal government, will be looking to see if outcome assessments will lead accrediting associations to discriminate in their classification of colleges and universities based upon the new standards, or in some other way provide the public with more information about the quality of instruction among institutions of higher education. This is a practice accrediting associations have avoided in the past, and partially explains why many state policymakers feel the need to develop statutes and policies around quality assurance.

Initiatives of Governors, State Legislatures and Governing Boards

The new responsibilities for quality assurance at the state level are the result of a shift in the priorities in public higher education over the past five years away from more emphasis on access and toward greater emphasis on quality. In a 1979 address to State Higher Education Executive Officers (SHEEO), a distinguished leader of public higher education, John Millett, foretold the changing role of centralized lay boards:

"State boards of higher education are going to hear a great deal about quality in the next several years. We have talked about quality in public higher education in the past, but I believe it is fair to say that, at the level of state government, our necessary preoccupation in the 1960's and 1970's was with quantity rather than quality. Now, state governments will be told that it is time

to give renewed attention to the quality of our higher education endeavors." (Millett, 1979)

In 1986, the National Governors Association formed seven task forces aimed toward improving various aspects of education. Although six of the seven task forces were charged with matters related to elementary and secondary schools, one was called the "Task Force on College Quality." Based upon the testimonies and advice of higher education officials and professionals from assessment organizations and national education associations, the Task Force on College Quality recommended the following regarding outcome assessment:

- (1) State officials should clarify the mission of each public institution and encourage the same for independent colleges;
- (2) State officials should re-emphasize the fundamental importance of undergraduate instruction;
- (3) Each college and university should implement programs that use multiple measures to assess undergraduate student learning as a means of evaluating institutional and program quality, and share the information with the public;
- (4) State officials should adjust funding formulas to provide incentives for improving undergraduate student learning based upon the results of comprehensive assessment programs, and encourage independent colleges to do likewise;
- (5) State officials should reaffirm their commitment to access to public higher education for students of all socioeconomic backgrounds; and
- (6) Accrediting associations should use the information generated by student assessments in their considerations to grant institutional accreditation (National Governors' Association Center for Policy Research and Analysis, 1986).

Judging by their recent actions, many state legislatures and governing/-coordinating boards apparently share the sentiments of the governors. These state legislatures, together with the governors, have jointly enacted outcome assessment statutes in Florida and Colorado, and through their governing/-coordinating boards, they have developed assessment² policies in California, Florida, Georgia, South Dakota, Tennessee and Utah. These state statutes and policies vary in their goals and objectives, as well as in the methods they use to achieve their goals. Some state initiatives are aimed toward determining student eligibility to progress to the next higher level in the curriculum or to qualify for a degree; some are aimed toward determining resource allocations; still others are aimed at curriculum and program evaluation; and others have the singular goal of public accountability. A recent survey conducted by the

²A description of each of these state statutes and policies is provided in Appendix B.

Education Commission of the States (ECS) indicated that twenty-four states have special commissions engaged in studies on improving the quality of higher education, and seventeen states have pending legislation to require colleges and universities to conduct outcome assessment (Boyer and McGuinness, 1986).

Initiatives of Colleges and Universities

The expansion of higher education in recent decades has resulted in some rather dramatic changes that have broadened the scope of higher education. In order to provide greater access to and attract greater interest in higher education during the 1960's and 1970's, many colleges and universities reduced their admission standards, relaxed their general education course requirements, and offered more narrowly focused vocational programs. These policy shifts succeeded in attracting more and different students, and have also resulted in greater funding support through state funding formulas and other sources. As a result, a large number of students who need remedial education enter colleges (SREB, 1985), and a great many students are graduating from college with relatively narrow training and with inadequately developed skills. Many faculty and administrators have charged that policies to broaden access have resulted, perhaps inadvertently, in a severe decline in the quality of teaching and learning, and they have recommended steps that need to be taken in order to restore integrity to undergraduate education. Student assessment is prominent among those recommendations (Association of American Colleges, 1985; National Institute of Education, 1984). A recent survey conducted by the American Council on Education (ACE) revealed that more than half of America's colleges and universities are presently planning methods for assessing student learning (El-Khawas, 1986).

There is evidence at some colleges and universities that student assessment has provided information needed by faculty in order to evaluate goal attainment, strengthen curricula, improve instruction, and address some specific educational needs of students (Ewell, 1985; Ewell et al, 1986). The three most celebrated and also most comprehensive cases in which assessment results are used routinely by faculty and administrators for these purposes are Northeast Missouri State University (NMSU), Alverno College, and the University of Tennessee at Knoxville (UTK).³ Kean College in New Jersey has recently developed a plan for conducting assessment of student learning.

At least 250 colleges and universities have recently used assessments of students' basic skills and general education for students who complete the sophomore year. These assessments are generally referred to as "rising junior" exams (Harris, 1985). The typical pattern is to either administer a placement test to entering students or to rely upon the scores students receive on college admissions tests, then administer either the same test or a different test of general education and/or basic skills after students have completed two years of the curriculum (Hartle, 1985). The difference between the scores at the

³A description of these three institutional programs is provided in Appendix C.

beginning of college and at the conclusion of the sophomore year indicates whether students' skills and knowledge have improved after two years of instruction and in what areas they need further improvement.

In cases where institutions have instituted outcome assessment initiatives, the experience has typically given rise to some concern on the part of faculty about the appropriateness of proposed instruments to assess their particular curriculum; the motivation of students to perform on tests that have no bearing upon their progress; the particular uses of assessment results, both inside and outside the institution; and the levels of support that would be provided by the state or other external funding sources to address any problems revealed by assessments (Austin and Garber, 1982; McClain and Krueger, 1985).

The growing trend toward using common assessment practices is causing institutions to reexamine their missions, their programs and their instructional practices. However, the uncertainty about the expectations of external policy-makers in college-student assessment has caused many campus faculty and administrators to be apprehensive about its usefulness to improve higher education. Faculty are raising the following types of questions about the external demands for assessment: What needs do external organizations have for outcome assessment information? How will external organizations use the information and results of outcome assessment in their decision-making processes? How will the use of the results of outcome assessment by external organizations affect individual institutions, and student and faculty within those institutions? These are some of the many important questions that need to be addressed in the process of developing policies and practices on college assessment.

III. ASSESSMENT GOALS AND POSSIBLE STRATEGIES

Based upon the goals of the federal government, the standards of regional accrediting associations, the statutes and policies of state governments, and the policies and practices of higher education institutions, the most likely goals of college assessment to be pursued by policymakers and educators are the following:

- * To assist colleges and universities in determining students' academic and personal development needs, and to assure that students receive appropriate instruction and co-curricular activities before progressing to the upper division of the curriculum or before receiving a degree;
- * To evaluate and improve the quality of academic and co-curricular programs;
- * To provide alternative criteria for determining program and resource allocation, or for judging institutional effectiveness; and
- * To provide public accountability for institutional quality and effectiveness.

Each of these goals is elaborated upon below, and example of various state and institutional strategies for achieving these goals are provided.

To assist colleges and universities in determining students' academic and personal development needs, and to assure that students receive appropriate instruction and co-curricular activities before progressing to the upper division of the curriculum or before receiving a degree.

This is the goal of the Florida statutes, and the policies of the California State University system and the Georgia Board of Regents. They each require every student to take a test upon entering college, and another test to qualify to receive an associate's degree or progress to the junior class. This is also the goal of the Alverno College assessment program. Alverno College has a rather unique approach, however, in which assessment is part of every course, and all the courses and the assessments are interrelated.

If policymakers choose this goal, then provisions should be made and resources allocated for identifying each students needs for academic and personal development at entrance, and to assure that appropriate instructional and co-curricular activities are provided early in the college experience to address student needs. Colleges and universities could then be held accountable, as they are in the states of Florida, California and Georgia, for assuring that each student admitted achieves the necessary development at the conclusion of the prescribed instructional and co-curricular activities.

To evaluate and improve the quality of academic and co-curricular programs.

While everyone involved in college assessment activities at all levels aspires to achieve this goal, some policies and practices are more direct in stating this as the impetus and primary goal of their assessment activities. Such is the case of Northeast Missouri State's assessment program and the assessment policies of South Dakota and Utah.

If this policy option is chosen, then provisions should be made for institutions to periodically assess a sample of students from a cross-section of their academic and co-curricular programs to identify strengths and limitations. Resources should be made available for institutions to strengthen their programs in the area identified by the assessment as needing support. Rather than assessing each individual student's growth and development, institutions may use the more cost-efficient approach of assessing representative samples of students. Institutions could be accountable for each individual student's progress; or institutions may be held accountable for the overall effectiveness of their undergraduate programs, rather than each individual student's growth and development.

To provide alternative criteria for determining program and resource allocation, or for judging institutional effectiveness.

With this as a goal, policymakers will be confronted with making a choice between rewarding institutions for achieving specific benchmarks, or for providing needed resources to those institutions that fail to achieve specific benchmarks, so that they are able to improve performance. In the case of the

former, resources would be allocated to challenge institutions that are meeting high standards to continue to raise their goals and to work toward achieving new horizons. In the latter case, resources would be allocated to assist institutions in need of reaching their basic goals before they can even begin to think of reaching higher ones.

The state of Tennessee, through a funding policy (Performance Funding) of its statewide higher education coordinating board, has been able to strike a balance between the two options. The state coordinating board continues to award all institutions the available state funds generated by enrollment-driven formulas, while at the same time requesting the legislature to appropriate up to five percent more funds to reward institutions for their instructional and overall academic effectiveness in educating undergraduate students. This policy works as long as the legislature is willing to completely fund both the enrollment-driven formula and the performance formula to assure that resources are sufficiently balanced for meeting the needs of institutions in each category.

This goal can be accomplished using the same assessment approach introduced for the first goal, where every student is tested at several points in the curriculum or by assessing a sample of students (as in South Dakota and at Northeast Missouri State University) upon entering college, and again at the mid-point or end of the undergraduate curriculum. Institutions in the first case would benefit in resource allocation decisions by demonstrating success with each individual student; in the second case, they benefit by demonstrating overall student progress, as reflected by a random representative sample of students.

To provide public accountability for institutional quality and effectiveness.

This goal permits the most flexibility in the assessment strategy. Nonetheless, the methods of assessment used to achieve any of the three previous goals could also satisfy this goal. This goal may also be achieved by state reliance upon regional accrediting associations to enforce outcomes assessment criteria. This is the goal stated in the Colorado assessment statute, although the state's governing board may establish additional goals in implementing the statute. This is also the goal sought by the U.S. Secretary of Education.

In their efforts to achieve this goal, policymakers will have to make the choice between the flexibility allowed by accrediting associations, in which colleges and universities are permitted to use different assessment strategies and instruments, and the more systematic approach, in which all institutions conform to identical assessment techniques and use identical instruments. The assessment strategies of Northeast Missouri University, Alverno College and the University of Tennessee at Knoxville are examples of the variety of approaches that might be considered. Each institution, on the basis of its own assessment program, would demonstrate its results to the public, but could only be compared with other institutions in the areas where they share common instruments and processes.

IV. GUIDING PRINCIPLES FOR COLLEGE ASSESSMENT

As state policymakers and elected officials continue to develop policies and/or statutes for college assessment, they will have several alternative approaches from which to choose. Some policymakers may desire to replicate existing policies enacted by other states or by colleges and universities. On the other hand, state policymakers may desire to seize the opportunity to exercise their own creativity by modifying existing policies or by combining the most salient features of several existing policies. Still other policymakers may proceed along the course of pursuing outcome assessment activities through their regional accrediting associations, encouraging the accreditors to become more accountable to the public. Whichever course of action is chosen, policymakers should adhere to the following principles:

- * College assessment policies should be multidimensional, and student cognitive development should be only one component;
- * Assessment policies and practices should exceed assessing basic skills and minimum competence, especially if the instructional program of the institution is broader;
- * Assessment policies should be developed with realistic expectations of fulfilling the stated goals;
- * Assessment policies should include provisions for analyses of the effects of the assessment upon students, institutions and the teaching and learning process; and
- * Assessment results should yield dividends that justify the state's or institution's investment.

Assessment Policies Should Be Multidimensional:

Because the primary mission of higher education institutions is to provide instruction, it is quite appropriate that student learning and development be the centerpiece of assessment policies. However, assessment policies should reflect the value to be derived from a variety of methods of assessing instructional quality, including (but not limited to) traditional cognitive tests.

The current trend of administering cognitive assessments of general education after two years of college, and major field assessments after four years, has proven to be useful at several colleges and universities. Higher education institutions have used this approach for demonstrating the effectiveness of curricula and also for improving teaching and learning. Information derived from these cognitive assessments alert faculty and administrators to the need for strengthening certain aspects of the curriculum; inform students about their educational progress and needs; and inform policymakers about the need for resource allocation to support various aspects of instructional programs.

Some of the recent state and institutional assessment policies demonstrate the value of additional modes of assessment to complement cognitive assessment and provide similar indicators of instructional program quality. Such methods

include: student evaluations of course and instructional quality; student satisfaction with the quality of the curriculum; student personal and affective development; student retention and interest in their educational program; student involvement in academic and co-curricular activities; faculty peer evaluations; alumni achievements; and employers' evaluations of alumni work performance. Policymakers appear to believe that, since colleges and universities have broad missions and roles, assessment should be broad enough to provide feedback about as many institutional roles as possible.

College Assessment Policies Should Exceed the Goal of Minimum Competency:

Most state assessment statutes and policies thus far focus upon basic skills assessment or on assuring minimum competence. These statutes and policies appear to be targeted toward determining the effectiveness of developmental and remedial instruction, yet they usually require administering basic skills tests to all students, many of whom demonstrate proficiency in basic skills when entering college and who therefore are not enrolled in developmental courses. Such policies may result in superfluous and inappropriate testing on the one hand, and on the other hand, overlook the value of assessment of college curricula.

Relatively little of the college curriculum is devoted to basic skills development, but rather to developing advanced skills toward higher academic achievement in general education or in a specific discipline. Accountability of educational quality, or quality assurance at the higher education level, should exceed the expectation of basic skills development.

In reaction to the recent tendency of policymakers to consider minimum competency assessment in higher education, Gregory Anrig, president of Educational Testing Service, gives the following advice:

"The minimum competency approach can be bad for the health of higher education. No one intends to standardize higher education. To equate higher education with such minimums is to contradict and undermine its very purpose. Gaining consensus of the essentials in higher education is more complex than in the schools, because of the greater diversity of academic, professional and career programs that college students select. Yet general consensus is essential for any general assessment program to succeed within or across institutions." (Anrig, 1986)

Assessment Strategies and Practices Should Be Designed to Deliver Intended Results:

The trend toward administering assessments to either each individual student, or to a sample of students, upon entering college and then again as rising juniors or graduating seniors, provides useful information but frequently uncertain and imprecise information. This approach has been popularly referred to as "value-added assessment" and, at the moment, is the most widely used college assessment practice. The difference between students' entering performance and the performance two or four years later reflects the overall

effectiveness of the curriculum and purportedly indicates the amount of student growth. While this can be a very efficient and valuable approach to obtaining information about student progress of individuals or groups of students, it also has some severe limitations that are frequently overlooked. Nettles and Turnbull (1986) caution those involved in assessment practices to be mindful of the following:

- * Group level analyses of cohorts often fail to account for attenuation that results from both attrition within the cohort over two or four years of college, and the recomposition of the cohort due to students who transfer into the institution.
- * Repeated items and/or exercises yield results, part of which may be explained by familiarity due to prior administration and part due to knowledge gained. (Greater exploration into hierarchical assessment is needed in order to assure measurement of knowledge and achievement.)
- * The changes in student abilities may be partially or entirely due to students' experiences other than the college curriculum.
- * It is not possible, with long gaps between measurements, to determine at which points during the curriculum certain developments in critical thinking or other types of development occur. This would be important information to have for revising or prescribing curricular experiences.
- * The before-and-after difference scores, on which estimates of student gain are based, are beset by problems of unreliability and regression effects that make interpretation hazardous.

Assessment Policies Should Include Provisions for Analyses of the Effects of Assessment:

Because college assessment policies have only recently been enacted, the results of student performance and the use of assessment results for academic or public policy purposes are very limited. Future assessment policies could benefit from provisions for routine analyses of the impact of assessment practices upon students of different educational, socioeconomic and ethnic backgrounds. Such analyses will permit policymakers to assure that assessment policies, as well as instructional quality, are beneficial to the broad range of college students. Such analyses will also permit policymakers to examine the issues of access and equity in the broader context of educational quality. In the state of Florida, for example, through analyses of the results from CLAST, it is apparent that the average scores and pass rates of minority students are below those of majority students. This is a clear indicator to educators and policymakers in Florida that the educational services provided to minorities need to be enhanced. Careful examination of the educational and co-curricular factors related to the lower performance of minorities will assist educators to develop means to improve their curricula to better educate minority students.

Assessment practices should make provisions for identifying differential college experiences and outcomes for minority and disadvantaged students. The results and information generated by assessments can be valuable for determining the probable causes for student attrition and progression, as well as factors related to performance in college courses. Assessment may also be used for identifying successful instructional programs for students with different types of educational backgrounds, and different educational and career interests. This can be accomplished by examining the educational experiences and backgrounds of students who have superior performance on college assessments.

Assessment Results Should Yield Dividends That Justify the State's and Institution's Investment:

The chief benefit from outcome assessment, regardless of its specific goal, is that it provides information that is presently unavailable, but greatly needed for decision-making. Outcome assessment can provide information needed for: designing academic and co-curricular programs for individual students; improving the educational process for students; revising curricula; determining resource allocations; or informing the public about the status of higher education institutions. The cost for conducting assessment programs depends upon such factors as: (1) the assessment approach selected -- whether the state of institution decides to develop its own new assessment instruments, work with an assessment organization to develop new instruments, or use existing instruments; whether special provisions have to be established for administering assessments, processing and reporting the results; or whether existing operations can be expanded to accommodate the assessment service and reporting requirement; and (2) the size of the institution(s) involved in the assessment.

Because these factors vary so greatly among higher education institutions and state systems of higher education, it is impossible to estimate a generally required investment. However, Ewell and Jones (1986) have developed cost estimates for a range of different types of institutions, based upon some common conditions found among higher education institutions. They indicate that institutions normally incur costs in the following four basic areas when constructing assessment programs:

"First, assessment instruments (tests and surveys) must be constructed locally or must be purchased from an outside vendor. Second, these instruments must actually be administered to students. Third, the resulting data must be analyzed and disseminated. Finally, the assessment effort itself must be coordinated." (Ewell and Jones, 1986)

Recognizing that the costs for tests and surveys vary, and that computer and personnel requirements and costs vary among institutions, and allowing for different assessment approaches that are appropriate for different types of institutions, Ewell and Jones (1986) have arrived at some cost estimates for outcome assessment at four different types of institutions. For assessments of general education and affective development through externally developed cognitive tests and student opinion questionnaires to each entering freshman and either rising juniors or graduating seniors, Ewell and Jones estimate the institutional costs to be around \$30,000 at a small private liberal arts college

of 10,000 students. Using the same approach with a sample of students at a state university with 5,500 students, they estimate the institutional costs to be under \$35,000. They estimate the cost for the same general education and affective development assessment, plus major field assessments, of samples of student at a large public research university with 18,000 undergraduate students to be over \$120,000. Finally, they estimate an assessment program involving basic skills testing and affective development to freshmen and graduates of a community college with 15,000 students to cost under \$45,000.

In each case, Ewell and Jones' analyses represent minimum and rather conservative cost estimates. They estimate, for example, personnel costs will involve faculty using released-time devoting from .35 FTE to .50 FTE at the three smaller campuses to carry out the assessment activities. Very few institutions will get maximum benefit from outcome assessment with such little investment of human resources. The institutions with the most successful programs presented earlier involve far more personnel, including a full-time coordinator and several (if not all) faculty. The states of Florida, Georgia and Tennessee have assigned full-time senior staff to administer and oversee their assessment programs. Properly analyzing assessment results and writing reports for faculty and administrators, as well as lay and professional governing board officials and accrediting associations, requires much more of a human resource investment. Without an appropriate staff commitment to the process, assessment data may not be converted into information for improving student learning, for improving programs and curricula, or for gaining public or external support.

V. ISSUES RELATED TO DEVELOPING OUTCOME ASSESSMENTS

How effective are the current assessment practices and instruments for achieving various policies of state government, institutions and accrediting associations? At the same time that policymakers and educators are determining the nature of their assessment practices, assessment organizations are developing new tools and improving existing ones to achieve the goals envisioned. Different policies and goals require different assessment instruments and procedures. Some of the prevailing state and institutional policies are aimed at assessing individual students, while others are aimed at assessing program and curricula effectiveness. Based upon these prevailing policies and practices, the needs for assessment instruments appear to fall in the following categories:

- * **Student Placement and Remediation:** instruments to determine the level of each individual student's academic skills and personal development upon entering college, yielding information needed by students and faculty in order to plan appropriate academic and co-curricular experiences early in the curriculum;
- * **Student Progression and Graduation:** instruments to assess individual students' general education skills and knowledge, and their personal development, at either the middle or end of the curriculum for decisions about student progression and graduation.

- * **General Education Program Evaluation:** instruments to evaluate the effectiveness of core curricula and co-curricular programs by assessing the general education knowledge and skills and the personal development of a representative sample of students at either the middle or end of the curriculum;
- * **Student Major Field Achievement:** instruments to assess each individual student's knowledge and abilities in their major field at the end of the curriculum, to judge their knowledge about their chosen profession;
- * **Major Field Program Evaluation:** instruments to evaluate academic departments and major field curricula by assessing a representative sample of students' knowledge and skills in their major field at the end of the curriculum.

In the case of the individually reliable instruments, with the exception of placement (basic skills) tests, the availability is very limited. And instruments designed specifically for group assessment at the higher education level, up to this point, have been nonexistent.

Student Placement and Remediation:

Basic skills placement tests for entering college freshmen are the most abundant among the above categories of instruments. The most commonly used of the basic skills placement tests, in conjunction with state policies, are the Multiple Assessment Program and Services (MAPS) and the New Jersey Basic Skills Test (NJBST), both developed by ETS, and the Assessment of Skills for Successful Entry and Transfer (ASSET), developed by ACT. The NJBST is administered to all entering college freshmen at all state colleges and universities in New Jersey, and MAPS is administered annually to students at many of the state colleges and universities in Florida, Tennessee, and California. All state colleges and universities in Georgia will begin using ASSET in the Fall of 1987, and several community colleges in Florida and California currently use ASSET.

The MAPS contains a variety of tests in the areas of English, mathematics, social sciences, natural sciences, foreign languages, and literature. The MAPS also has available for use with the tests a Student Descriptive Questionnaire and a Biographical Inventory, which include over sixty questions about students' personal and academic backgrounds, their vocational interests, and their extra-curricular activities. The purpose of the instrument is to provide college faculty and staff with information to use in advising students and in planning academic and co-curricular activities.

The ASSET includes the following areas: numerical skills, reading skills, language usage, elementary algebra, intermediate algebra, college algebra, and advanced language usage. The ASSET is accompanied by the Educational Planning Form, which obtains background information and student objectives, for purposes of advising students and for faculty and staff to use in planning academic and co-curricular activities.

General Education Assessments:

State policymakers and college faculty and administrators recognize limitations in the number and structure of existing instruments for their specific goals beyond placement and remediation. The states of Tennessee and South Dakota, as well as Northeast Missouri State University, use the ACT COMP, as have an estimated 250 colleges and universities, as a measure of students' general education (Harris, 1986). The ACT COMP is an individually reliable instrument that includes three process areas and three content areas. The process areas are: oral and written communication, problem solving, and values clarification. The content areas are: functioning in social institutions, using science and technology, and using the arts.

ETS is developing a general education assessment instrument, called "The Academic Profile," that will have a short (1 hour) version for group reliable assessment and a longer (3 hour) version for individual reliability. The instrument has four skill areas and three content areas. The skill areas are: reading, writing, use of numerical data, and critical thinking. The three content areas are: social sciences, natural sciences, and humanities. This instrument is structured in such a way as to allow for individual or group assessment of students' skills in reading, writing, use of numerical data and critical thinking in each of the three content areas. The instrument will be available in the Fall of 1987.

Major Field Assessments:

Most of the tests currently used for assessing major fields, either at the individual or program level, were developed for other purposes. They are the subject matter tests of the Graduate Record Examination Board (GRE), whose purpose was to assist in the graduate school admissions process or professional licensure exam boards, whose purpose was to attain credentials needed to practice in a profession after receiving a degree. ETS is also developing plans for major field assessments at the end of the curriculum that will provide institutions with instruments that are appropriate for the general college graduate in certain disciplines, rather than the select few that aspire toward graduate school or choose to practice in a particular profession. However, there will still be several disciplines for which no instruments will be available.

Using Existing Instruments and Developing New Ones:

While assessment organizations are in the process of developing or improving instruments for general education and major field assessment, state systems of higher education have elected to use existing instruments; or they have chosen to develop their own measures. Some state officials and educators are collaborating with assessment organizations to develop instruments tailored to their specific needs. Included among these are the California State University system, and the state boards for higher education in Maryland and New Jersey. Others, like Alverno College and the states of Florida (CLAST) and Georgia (Regents Test), are deploying faculty from their campus(es) to develop their instruments without the involvement of assessment organizations. Many other institutions and state governing/coordinating boards use existing instruments,

even if these instruments were developed for a different purpose. Such is the case at Northeast Missouri State University and Tennessee's public colleges and universities in their use of GRE subject tests for college seniors.

VI. CONCLUSION

Evidence of the growing interest in college outcome assessment is revealed by the federal government's support of research and development projects on outcome assessment methods; by the urging of the U.S. Secretary of Education for colleges and universities to be more accountable by demonstrating their instructional outcomes; by the recent actions of governors, state legislatures, and governing/coordinating boards to develop statutes and policies requiring colleges and universities to conduct outcome assessments; by the new outcome assessment criteria and standards developed by regional accrediting associations; by the independent initiatives of several colleges and universities to assess student learning and development; and by the initiatives of assessment organizations to develop instruments for assessing student cognitive and affective development. While college assessment as a science is in its embryonic stage of development, its growth and expansion will require some allocation of resources and energy to improve its usefulness to higher education and the general public.

Policymakers are expected to continue devoting attention to initiating assessment statutes and policies, while educators focus upon identifying outcomes criteria, developing or improving instruments for assessing outcomes, analyzing and applying the results to improve undergraduate curricula and learning, and providing public accountability. Although the need to forge ahead with quality assurance and public accountability is evident on a variety of fronts, it is apparent through existing policies that both educators and policymakers recognize the importance of using multiple indicators of student development and instructional effectiveness, rather than relying upon a single measure to inform about either. Policymakers and educators should also plan to monitor the effects that assessment policies and practices have upon not only their intended goals of quality assurance and accountability, but also upon other important policy areas, such as access and equity.

For colleges and universities that are considering college assessment policy options, the approaches taken by Alverno College, Northeast Missouri State University, the University of Tennessee and, more recently, by Kean College of New Jersey, provide good examples of how to involve the entire campus community in the planning process. The approaches of these four institutions also provide examples of the major issues to be considered in the planning process. As with other major initiatives, college assessment requires both faculty and administrative leadership and a commitment of resources for conducting the assessments, for analyzing the results of the assessments, and for addressing any problems identified by the assessments. College faculty and administrators must decide what is to be assessed, for what reason, and with what possible consequences. Faculty and administrators should be flexible and open to experiencing a variety of assessment approaches, and should also consider coordinating their assessment activities with peer institutions in order to share resources and broaden the context of assessment results.

Appendix A

The Middle State Association (MSA) Criteria on Program and Student Outcomes, and the Southern Association for Colleges and Schools (SACS) Standard for Institutional Effectiveness

FOR PROGRAM OUTCOMES:

Tests and measurements, among other means, should be used to discover all that such devices can tell about the progress of students in the mastery of subject matter, development of skills, logical precision, and ability to apply knowledge. Efforts should be undertaken to assess student achievement in general, as well as in specialized areas of the curriculum, on an inclusive (as well as a course-by-course) basis and, when possible, in comparison with student achievement elsewhere. Institutions should make frequent appraisals of the records of their graduates in education beyond the two- or four-year college level, survey alumni opinions, and solicit reports from employers.

FOR STUDENT OUTCOMES:

Some things can be learned through close observation of student conduct:

- * How responsible and constructive is student participation in their own government?
- * What attitudes and maturity of interest do the students exhibit in their activities and in their responses to cultural, civic and professional opportunities?
- * Do their interests change while they are in college?
- * What can be discerned about their attitude toward social values?
- * What are the characteristics of their social life?
- * Do they show increasing interest in scholarship and/or proficiency as they get deeper into their subjects?
- * Do they reveal changing patterns of behavior or growth, and at least suggest that the changes are related to the institution's educational program?

MEASURING AND ASSESSING OUTCOMES:

A plan for the measurement of outcomes may well include: an evaluation of undergraduate scholastic achievement, taking the form of comparison of scores in standardized tests with the results of placement examinations taken at entrance; a study of the performance of graduates in senior colleges or in graduate and professional schools; long-term study of the achievement, both vocational and avocational, of the alumni, based on data gathered periodically and systematically; an intensive study of one class from entrance through graduation and beyond.

The following is a description of the SACS standard on institutional effectiveness (Criteria for Accreditation, Commission on Colleges, 1984):

INSTITUTIONAL EFFECTIVENESS:

The quality of education provided by member institutions in the primary consideration in the decision to confer or reaffirm accreditation. The evaluation of educational quality is a difficult task, requiring careful analysis and professional judgment. Traditionally, accreditation has focused attention almost exclusively upon institutional resources and processes. It has usually been assumed that, if an institution has certain resources and uses certain processes, effective education will occur. A comprehensive approach to accreditation, however, takes into account not only the resources and processes of education (such as faculty and student qualifications, physical plant, fiscal resources, and other elements addressed in the Criteria), but also the evaluation of the results of education and plans for the improvement of institutional programs.

The level of institutional quality depends not only on an institution's educational processes and resources, but also on the institution's successful use of those processes and resources to achieve established goals. Institutions have an obligation to all constituents to evaluate effectiveness and to use the results in a broad-based, continuous planning and evaluation process.

PLANNING AND EVALUATION:

To focus attention on the effectiveness of the educational program, the institution must establish adequate procedures for planning and evaluation. The institution must define its expected educational results and describe how the achievement of these results will be ascertained. Although no specific format for this planning and evaluation process is prescribed, an effective process should include:

1. Broad-based involvement of faculty and administration;
2. Establishment of a clearly defined purpose appropriate to collegiate education;
3. Formulation of educational goals consistent with the institution's purpose;
4. Development of procedures for evaluating the extent to which these educational goals are being achieved; and
5. Use of the results of these evaluations to improve institutional effectiveness.

In addition to establishing procedures for evaluating the extent to which their educational goals are being achieved, institutions should ascertain periodically the change in the academic achievement of their students. Procedures used to evaluate instructional programs may include: peer evaluation of educational programs; structured interviews with students and graduates; changes in students' values, as measured by standard instruments of self-reported behavior patterns; pre- and post-testing of students; surveys of recent graduates; surveys of employers of graduates; student scores on standardized examinations or locally constructed examination; performance of graduates in graduate school; performance of graduates of professional programs on licensure

examinations; or the placement of graduates of occupational programs in positions related to their fields or preparation.

Institutions with research or public service missions must develop and implement appropriate procedures for evaluating their effectiveness in these areas. The appropriateness of any evaluation procedure depends upon the nature of the institution and the institution's goals for instruction, research and public service. The Commission on Colleges prescribes no set of procedures for use by an institution, and recognizes that an effective program to evaluate institutional effectiveness will usually require the use of a variety of procedures.

Appendix B

State Statutes and Policies for College Outcome Assessment

This section provides a description of the assessment statutes of the states of Florida and Colorado, and the assessment policies of the states of Tennessee, Georgia, California, South Dakota and Utah.

Florida's Statutes on College Preparatory Instruction and College-Level Academic Skills Program (CLASP)

The Florida state legislature and governor began their active involvement in the quality assurance governance of higher education in 1979 by passing a law requiring all students entering undergraduate education programs to receive a score at or above the fortieth percentile on the American College Testing Program (ACT) or the Scholastic Aptitude Test (SAT). Then, in 1982, the Florida legislature and governor enacted a law requiring every student in Florida's public colleges and universities to pass the College Level Academic Skills Test (CLAST), a test of basic communication and computation skills, before receiving an associate's degree or entering the upper division of the state's universities (College Level Communication and Computation Skills Examination Act, 1982). The law also applies to students enrolled in private universities who receive state financial aid.

In 1985, the legislature and governor passed another law compelling state colleges and universities to require a test of all entering college students for placement purposes (College Preparatory Instruction in Community Colleges and Universities Act (CPICCU), 1985). Students who fail to achieve specified scores on the entering tests are assigned to remedial courses. The universities make the placement decision on the basis of students' scores on the ACT or the SAT, while the community colleges administer either ACT's Assessment of Skills for Successful Entry and Transfer (ASSET) test or the Multiple Assessment Program (MAPS), developed for Florida by ETS. Then, after completing sixty degree credit hours, each student in Florida's public colleges and universities, regardless of their entering college admissions of basic skills test scores, are required to take the College Level Academic Skills Test (CLAST), which includes reading, writing, and computation. The CLAST was developed by the faculty of colleges and universities in Florida.

The purpose of this statute and the CLASP statute is to ensure that students who need basic skills development in communication and computation upon entering college receive appropriate instruction, and that they acquire the skills expected by the state government after completing two years of college.

In addition to the statutes creating CLAST and the CPICCU, the Florida Department of Education, which governs the state colleges and universities, enacted a policy requiring each student to take twelve credit hours of English or humanities, and six credit hours of mathematics at the college algebra (or above) level, before completing his/her sophomore year. The state policy also stipulates that students are required to write at least 6,000 words in each English/humanities course taken to fulfill the twelve credit hour requirement. Students who enter college with adequate preparation, as demonstrated by their

high school grades, and who achieve a passing score on the College Level Examination Program (CLEP) test of mathematics, may be exempt from the math course requirements.

In addition to requiring a test, the statute creating CLAST included a substantial increase in the funding for higher education. The statute increased the base amount of the state's annual appropriation for community colleges by seventeen million dollars, which is about three percent of present annual appropriations, and five million dollars at universities, which is about one percent of state appropriations. This additional appropriation was earmarked for many of the quality improvements requested by college and university faculty, such as reduced class sizes and teaching loads for faculty, and improved learning resources and equipment.

Colorado Statute on Higher Education Accountability

In 1985, the Colorado legislature and the governor passed House Bill No. 1187, reorganizing the governance structure of public higher education in that state. Article 13 of the bill is called "Higher Education Accountability," and requires that state colleges and universities "be held accountable for demonstrable improvements in student knowledge, capacities, and skills between entrance and graduation, and that these demonstrable improvements be publicly announced and available" (Colorado House Bill No. 1187, 1985). The statute requires that state colleges and universities develop specific goals and objectives for student achievement and development, identify the activities that can advance students toward those objectives, and then measure objectively both their quantitative and qualitative achievement.

The Colorado statute requires the Colorado Commission for Higher Education to implement the statute and to provide annual reports of the results to the governor and the legislature. Beginning on July 1, 1990, the statute authorizes the commission to return to the state treasury up to two percent of state appropriations for any institution that fails to comply with the statute or the commission's policies and guidelines for implementing the statute. Although the commission has not yet stated its policies or guidelines, it is clear from the following language of the statute that objective assessments of student cognitive and affective development will be included, and that the commission's policies can be flexible enough to permit different approaches at different institutions:

"Statements of expected student outcome shall be described in terms of knowledge, intellectual capacity, and skills, and may include other dimensions of student growth, such as self-confidence, persistence, leadership, empathy, social responsibility, understanding of cultural and intellectual differences, employability, and transferability... Institutions of higher education shall design and implement a systematic program to assess the knowledge, capacities, and skills developed by students in academic and co-curricular programs. In changing current systems of assessment, institutions of higher education shall ensure that the instruments and methods used are appropriate for: (1) the knowledge, capacities, and skills addressed; and (2) the stated objectives of

undergraduate education at each institution" (Colorado House Bill No. 1187, 1985).

Tennessee's Performance Funding Program

The state of Tennessee has adopted a policy to use instructional evaluation criteria to complement its enrollment-driven funding formula. State colleges and universities in Tennessee are eligible to receive up to five percent of their educational and general expenditures for their use of and results from five indicators of instructional quality. These indicators are (1) assessment of students' skills and abilities in general education after four years of college; (2) assessment of students' knowledge and abilities in their major field at the point of graduating with an associate or baccalaureate degree; (3) assessment of students' satisfaction with the quality of their undergraduate academic and co-curricular experiences; (4) the number of eligible professional degree programs accredited by the appropriate accrediting association; and (5) the quality of institutional plans to improve the quality of the institution. The first three criteria require institutions to conduct objective assessments of their students' performance and satisfaction with their college experience.

Colleges and universities in Tennessee administer the ACT COMP or a major field examination to each student as he/she prepares to graduate from college, but students are not prohibited from graduating or from going to the next higher grade level based upon their test performance. The emphasis is upon institutional and curriculum evaluation, rather than individual student evaluation. Nonetheless, every student who graduates from state colleges and universities is required to take a general education test or a test in his/her major field.

Although institutions are eligible to receive funding above the amount generated by the enrollment-driven formula when achieving positive results, their funding generated by enrollment-driven formulas is not reduced for failure to achieve positive outcomes. The state colleges and universities in Tennessee will receive seventeen million dollars above the enrollment-driven funding formula in 1987-88 as a result of their performance on instructional evaluation, which is slightly below five percent of state appropriations for education and general expenditures for higher education in Tennessee.

Georgia's University System Regents Test

Since 1972, the Georgia Board of Regents has required all undergraduate students in state colleges and universities to achieve a passing score on the University System Regents Test, consisting of reading and essay components, before graduating with either an associate or baccalaureate degree. These tests are developed and scored by representatives of the faculties at the state universities. Students are required to take the test after completing sixty degree credit hours. If a student does not pass the test, then he/she must register for remedial courses for each subsequent term until passing the test. Remedial courses are also required for entering freshmen who score below a level specified by each institution on college entrance examinations and Georgia's Basic Skills Examination. In 1986, the state of Georgia will institute a new

test, called the "College Placement Examination," to replace its Basic Skills Examination (Regents Testing Program, 1982).

The California State University Graduation Writing Assessment Requirement

In 1976, the California State University System (CSU) adopted policy requiring writing proficiency for undergraduate and graduate degree recipients of CSU colleges and universities. The system-wide Graduation Writing Assessment Requirement/Writing Skills Program, as the policy is called, has the following three components: (1) to identify and provide support for entering students with inadequate reading and writing skills; (2) to identify and offer university credit for those with highly developed writing skills; and (3) to require upper division and graduate students to demonstrate a level of writing proficiency which may be expected of college graduates.

The CSU administers the English Placement Test (EPT) to entering students for purposes of diagnosis and placement. The EPT measures reading and writing skills, and generally identifies 51% of entering freshmen who require extra developmental instruction in writing skills. For students who do not require developmental courses, the CSU offers the English Equivalency Examination (EEE). Students who receive a passing score on the EEE may receive up to two terms of credit in English at CSU.

Each student is required to demonstrate writing proficiency, however, before receiving a bachelor's or a graduate degree, regardless of their performance on the EPT or the EEE. Each institution is required to demonstrate to the CSU board that every graduate has acquired the appropriate writing skills before graduating. Each institution is allowed to determine the methods and instruments to use for the writing outcome assessment, and all assessments are administered by campus faculty, either in conjunction with a senior-level writing course, or in a special test administration. Some campuses require that students pass a designated upper division or graduate course which includes an extensive amount of written work, while others offer students the option of passing a writing proficiency course or test. No funding policies are attached to the CSU outcomes assessment policy.

South Dakota Board of Regents Assessment Policy

The South Dakota Board of Regents adopted its Regents Assessment Policy in the summer of 1984. This assessment policy is aimed toward improving academic and co-curricular programs. The assessment policy has a value-added component and an exit component and, rather than requiring all students to take the outcomes tests, the institutions select random samples of students from the target population.

The Regents Assessment Policy requires that each higher education institution administers a general education test to a random sample of one-half of each entering freshman class, and administer the same test to the same students after they have completed the first two years of college. All the colleges and universities in South Dakota are using the ACT COMP to fulfill this component of the policy. The Regents Policy also requires that all students take an exam in

their major field before graduating. To fulfill this requirement, the institutions are administering licensure exams in several disciplines, such as the EIT for engineering majors; certification examinations, such as the NTE, for education majors in some fields; and the GRE subject area tests in other fields. Finally, the policy requires that institutions administer an attitudinal survey to entering freshmen and again to the same students periodically throughout their college experience. The institutions use a variety of instruments, ranging from those developed by faculty to survey instruments and questionnaires developed by assessment and measurement organizations.

The South Dakota Regents Assessment Policy does not require a passing score on any of these tests at any level, and students are not required to pursue any extraordinary academic experiences on the basis of their performance. Institutional funding is not dependent on students' or institutional performance on the outcomes assessments.

Utah Board of Regents Policy on College Assessment

In 1986, the Utah Board of Regents established a policy on student outcome assessment for the purpose of promoting accountability, quality, and program effectiveness at its state universities. The Utah policy is very broad and, while specifying some general guidelines, delegates the responsibility of designing and implementing assessment to each institution. The policy makes allowance for different assessment practices at different institutions because of their different missions. In fact, the policy states that the differences in the missions of the state colleges and universities should preclude the adoption of one instrument to use in assessing college students. However, the policy urges each institution to include the following:

- * "Value-added" student outcomes assessment at the sophomore and/or senior years;
- * Assessment of "cognitive learning" and "skill development";
- * Professional or field-related assessment at graduation;
- * Periodic, ongoing assessment of student opinions regarding their college/university experience;
- * Assessing the opinions of students who transfer or otherwise leave the institution, including their reasons for leaving;
- * Career and job placement records of graduates; and
- * Longitudinal assessment of student perceptions of their higher education experience five years or more after graduation.

The Utah Board of Regents requires each institution to report the results of its evaluation every five years, including institutional decisions that were based upon the results of the assessments. The Regents also pledged to provide the financial and personnel resources needed by its colleges and universities to carry out their assessment activities.

These state statutes and policies on outcomes assessment represent examples of possible approaches for state policymakers in other states who are planning statutes or policies of their own. But in order to appropriate the most effective policies, policymakers should also understand the assessment process and impact from the perspective of higher education institutions and accrediting associations.

Appendix C

Three Examples of Comprehensive Institutional Assessment Programs

This section describes the college assessment programs at Northeast Missouri State University (NMSU), Alverno College, and the University of Tennessee at Knoxville (UTK). Efforts at NMSU and Alverno College were initiated in the early 1970's from within the institution, rather than by external requirements. The UTK program was initiated in the mid-1970's, prompted by the Tennessee Higher Education Commission through its Performance Funding Program. Although these three programs are different, each one has provided the feedback that faculty, administrators and students find helpful for improving the teaching, learning, and co-curricular activities, while also satisfying demands for accountability.

Northeast Missouri State University

The Northeast Missouri assessment program, frequently called the "value-added assessment program," was initiated in the early 1970's as the institution changed from a normal school to a comprehensive regional university. The assessment program was begun out of an interest among the administrators and some faculty in knowing the effect that the institution, with its new mission, had upon student learning and development. The program now seeks to serve three purposes: (1) to demonstrate that the NMSU makes a positive difference in students' lives; (2) to demonstrate that students who graduate from NMSU are competitive in terms of knowledge, skills and personal development; and (3) to enable NMSU administrators and faculty to know everything possible about their students.

To fulfill these three purposes, the institution developed a comprehensive data base that includes the following:

- * All students' academic and personal backgrounds prior to entering college;
- * All students' academic and extracurricular activities while in college, all students' postcollegiate educational and professional activities as alumni;
- * All students' performance on college entrance examinations (ACT) when entering college and repeated after completing the sophomore year; and
- * Students' performance on licensure examinations, such as the NTE, the American Institute of Certified Public Accountants Achievement Exam (AICPA), or the GRE subject tests, just prior to graduating with a baccalaureate degree.

McClain and Krueger (1985) state the following effects of the NMSU comprehensive outcomes program:

"The comprehensive outcomes data system has acted as a catalyst for decision making. The assessment program has created an environment emphasizing the essential mission of higher education, namely, the

education and achievement of students. It has increased the attention on campus to the quality of education as a priority, and emphasis on the size of enrollment has decreased (Enthoven, 1970). This refocusing seems to have improved faculty morale. It has increased faculty awareness of national expectations for university graduates and comparative strength of our graduates in the job market after graduation. It has provoked discussion about student satisfaction with the university. It has reinforced the value of general education and promoted reexamination strengthening of the general education curriculum. It has prompted a reevaluation of university academic policies. It has created conditions prompting the Commissioner of Higher Education to recommend a mission change that recognizes the nationally competitive quality of the student body. Finally, it has directed the attention of the public outside the university to the university's demonstrated performance.

The faculty at NMSU has made adjustments in curriculum requirements and course content in response to their students' performance on examinations. Recently, upon noticing that students' math abilities had not improved between freshman and junior years, the faculty instituted a requirement that all students take college algebra. The faculty expect that, as a result, its students will be better prepared in mathematics upon graduating from NMSU. Similarly, upon discovering in 1981 that fewer than fifty percent of its accounting students scored below the fiftieth percentile on the AICPA exam, the NMSU faculty made some adjustments in courser requirements and in accounting courses, and the result is that it now has the highest passing rate in the nation." (McClain and Krueger, 1985; and Ewell, 1986)

Alverno College

Alverno College is a small private liberal arts college for women, located in Milwaukee, Wisconsin, with an enrollment of 1500 undergraduate students. In 1973, the faculty of Alverno College developed an assessment program that would be informative to faculty and to each individual student about her progress toward achieving the curriculum objectives of the college. These curriculum objectives are eight intellectual skills that will be used by the student throughout her life. These skills are communication, analysis, problem solving, valuing, social interaction, taking environmental responsibility, involvement in the contemporary world, and aesthetic response.

The methods for assessing student achievement of these skills is multifaceted, including written and oral presentations and experiments. An example of a typical assessment at Alverno is for a student to view a film and write a paragraph and/or give an oral interpretation of its contents. The assessments are mostly designed by faculty at Alverno, and judged by Alverno faculty and professionals in the business community of Milwaukee, who have no official affiliation with the college. Alverno avoids using externally developed instruments, except occasionally in order to compare its students' performance with those of other institutions. The eight skills are interwoven into every course, just as assessment is part of every course, in addition to regular course

examinations. Students receive continuous formal feedback on a personal interview basis with faculty.

The intended purpose of the Alverno College assessment program is to provide each individual student with diagnostic information about her progress in developing the designated skills of the curriculum, to contribute to the student's progress in developing her own skills, and as a basis for awarding the credential of each student's performance (Mentkowski and Loacker, 1985).

The University of Tennessee at Knoxville

The University of Tennessee at Knoxville is a major land-grant research university with 20,000 undergraduate students and 6,000 graduate and professional students. The university has a comprehensive student assessment program which heretofore has involved random representative samples of students for each activity, but which assured that every student who graduated from the institution was involved in one or more of the activities. Next year, the assessments will involve every student in all activities. The assessment activities include the following: (1) annual administration of a test of general education (ACT COMP) to a sample of entering freshmen and a sample of graduating seniors to measure growth in general education over the course of the curriculum; (2) assessment of achievement in major fields, using licensure exams, subject exams of the GRE, and tests developed by faculty for fields in which no outside examinations are available; and (3) student opinions about the quality of academic programs and services of the university, using an instrument called the "Student Satisfaction Survey," which was developed by faculty and staff at UTK.

The UTK faculty has used the results of these assessments to improve student advising, to improve courses and solve course scheduling problems that students were experiencing, and to improve course content in areas that students needed help, based upon their test score results. The university has recently begun increasing the amount of information it collects about students' course patterns, so that it can distinguish which curricular patterns lead to the most positive student learning and development outcomes. Because the state of Tennessee rewards the institution for conducting the assessment and for achieving positive outcomes, UTK has received \$1.2 million in 1982 (the first year of the program), increased to \$2.9 million in 1983 because of improved performance, and to \$3.5 million in 1984 (Banta, 1985).

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